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(54) DOCKING STATION FOR MULTIPLE DEVICES

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(56) References Cited

U.S. PATENT DOCUMENTS

5,030,128	7/1991	Herron et al 439/372
5,535,093	7/1996	Noguchi et al 361/686
5,537,343	7/1996	Kikinis et al 364/708.1
5,619,398	4/1997	Harrison et al 361/686
5,666,495	9/1997	Yeh 395/281
5,689,654	* 11/1997	Kikinis et al 395/281
5,822,546	10/1998	George
5,841,424	11/1998	Kikinis
5,964,847	10/1999	Booth, III et al 710/1

6,061,233	5/2000	Jung	361/686
6,115,242	9/2000	Lambrecht	361/684

^{*} cited by examiner

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(57) ABSTRACT

A docking station includes mechanisms to accommodate multiple devices simultaneously. In the preferred embodiment, the docking station can accommodate at least a notebook computer and a palmtop-type handheld device. The docking station preferably facilitates a communication link between the handheld device and the notebook computer when the two devices are docked to the docking station. The communication link allows transmission and synchronization of data between the handheld device and the notebook computer. In a first embodiment of the invention, the docking station includes a docking connector that can mate with the notebook computer. The docking station also includes a docking cradle that can accommodate the handheld device. In the preferred embodiment, the docking cradle is configured to be adjustable in angle, so that the docked handheld device can be positioned at a desired angle. In the most preferred embodiment, the docking cradle includes a security feature that locks the handheld device to the docking cradle to prevent theft. In a second embodiment of the invention, the docking station includes a slot in the housing to accommodate the handheld device, instead of the docking cradle. In a third embodiment of the invention, the docking station is comprised of two modules, a primary docking module and a supplemental docking module. The primary docking module is configured to accommodate the notebook computer, while the supplemental docking module is configured to accommodate the palmtop-type handheld device.

27 Claims, 9 Drawing Sheets

